Pre-Calculus
10.3 Practice

Name _____

$a_n = a_1 + (n-1)d$ $\quad S_n = \frac{n}{2}(a_1 + a_n)$

$a_n = a_1(r)^{n-1}$ $\quad S_n = a_1(\frac{1-r^n}{1-r})$

$S = \frac{a_1}{1-r}$

1) In a geometric sequence $a_4 = -36$ and $a_7 = 972$. Find S_{19}.

2) In a geometric sequence, $a_3 = -80$ and $a_8 = 2560$. Find S_{10}.

For 3 – 5, find the sum of each infinite geometric series if possible.

3) $18 - 27 + 40.5$ ...

4) $12 - 7.2 + 4.32\ldots$

5) $\sum_{n=1}^{\infty} 6(-0.4)^{n-1}$

6) If $S_n = 1{,}007{,}769$ for the series $3 + 18 + 108 + 648$ ..., find the value of *n*.

7) Given the series $\sum_{n=1}^{\infty} 5(2)^{n-1}$, find the value of *n* if S_n=315.